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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,628	01/28/2004	Debra L. Harp	FIREPLACE	3748

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EXAMINER

PRICE, CARL D

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,628

Applicant(s)

HARP ET AL.

Examiner

CARL D. PRICE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

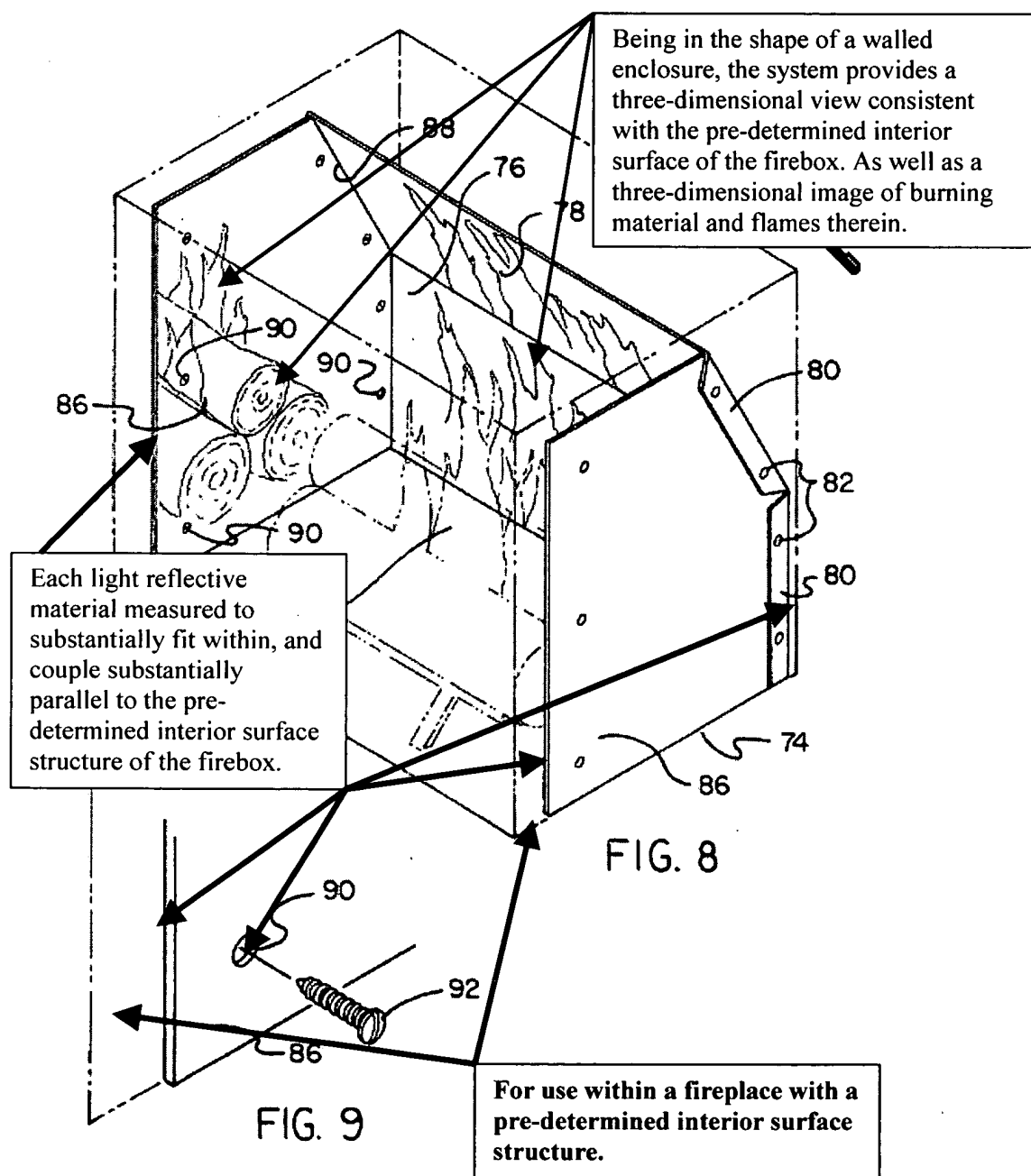
Applicant's arguments filed 07/10/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that "Dr. Sabharwal's expert opinion must be considered in light of the nature of the matter sought to be established", it is noted that the affidavit submitted by Dr. Sabharwal and filed 12/23/2005 under 37 CFR 1.132 has been considered by the Examiner. Applicant's attention is again directed to the examiner's analysis of Dr. Sabharwal's opinion, in the Office Action mailed on 02/08/2006, wherein the Examiner noted that "Affiant's comments in regard 'an angle of incidence and an angle of reflection' are not germane to the scope of the claimed invention which now attempts to define applicant's invention with regard to the system being 'adapted to provide a three dimensional view consistent with the pre-determined interior surface of the firebox'". And, wherein the Examiner concludes that "But for Affiant's opinion, no factual evidence has been presented that Kasulis et al (US005469839) would not provide a three-dimensional view at least to some degree and at least from one viewer's 'perspective'". Thus, contrary to applicant's inference, the affidavit submitted by Dr. Sabharwal and filed 12/23/2005 under 37 CFR 1.132 has been carefully considered by the Examiner.

The Examiner maintains the position set forth in the office action mailed Office Action mailed on 02/08/2006, and re-stated herein below, that Kasulis et al (US005469839) meets the limitations of applicant invention in the manner set forth in applicant's claims. Most notably, as can be seen in Figures 8 and 9 (reproduced here below), Kasulis et al (US005469839) shows and discloses a firelight reflective system for use within a fireplace having a firebox with a pre-determined interior surface structure, the system comprising with a pre-determined interior surface structure, each light reflective material measured to substantially fit within, and couple substantially parallel to, any pre-determined interior surface structure of the firebox, the system adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox. That is, being in the shape of a walled enclosure, the Kasulis et al (US005469839)

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system (Figures 8 and 9) provides a three-dimensional view consistent with the pre-determined interior surface of a firebox (shown in phantom; (Figures 8 and 9)). As well as a three-dimensional image of burning material and flames therein.



The affidavit under 37 CFR 1.132 filed **12/23/2005** is insufficient to overcome the rejection of claims **1-6** and **8-20** based upon **US005469839 (KASULIS et al)** as set forth in the last Office action because:

In an attempt to differentiate the claimed invention from the prior art reference of **US005469839 (KASULIS et al)** Affiant states that “ In my professional opinion as an individual highly skilled in the optical arts. The Office's analysis is incorrect. The Office's recitation implies that 'an angle of incidence and an angle of reflection are both substantially equal as viewed by a viewer of the systems' because 'each panel of [the Kasulis disclosure] displays an image to a viewer that is located within the vertical surfaces'.”

The Examiner must however note that the present amended claims no longer include, and therefore are not limited to or defined by, “the viewable surface having an angle of incidence and an angle of reflection are both substantially equal as viewed by a viewer of the systems”. Therefore, Affiant’s comments in regard “an angle of incidence and an angle of reflection” are not germane to the scope of the claimed invention which now attempts to define applicant’s invention with regard to the system being “adapted to provide a three dimensional view consistent with the pre-determined interior surface of the firebox”. Affiant’s remarks that “The Kasulis disclosure teaches the use of mirrors positioned at angles to the interior surface of the fireplace or firebox, which will create an optical view that is different in perspective from the original three dimensional construction of the fireplace or firebox.” and “The present invention, in contrast to the Kasulis disclosure, teaches the positioning of the reflective material to be substantially parallel to the interior surface of the fireplace or firebox, maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber”. However, it is noted that at least three of the reflectors (76,86,86; see figures 8 and 9) of Kasulis are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom) in the same manner described by Affiant as being necessary for “maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber”, albeit one of the reflective surfaces (78) may be oriented at an angle. In this regard, the Examiner can not agree with Affiant that the firelight reflective system of Kasulis et al (**US005469839**) would not provide a three-dimensional view consistent with the pre-determined interior surface of the firebox in the manner now recited in applicant’s claims. But for Affiant’s

opinion, no factual evidence has been presented that Kasulis et al (US005469839) would not provide a three-dimensional view at least to some degree and at least from one viewer's "perspective".

For the reasons set forth herein above and for the reasons set forth in the rejection of the claims stated here below the Examiner can not agree with applicant's argument that "Because of this very specific orientation, the Kasulis patent can never achieve reflective material which is substantially parallel to the interior surface of a firebox or fire chambers as recited by the present claims thereby maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 10-20: Rejected under 35 U.S.C. 102(b)

Claims **1-6** and **10-20** rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US005469839 (KASULIS et al)**(of record) as supported by the prior art teachings of **US003877802 (SHUMAKER)**, **US004309142 (GREENSPAN)** and **US003942879 (PLEDGER)**, as well as **GB2220060 (BUTTERFIELD)**, **US004121114 (HISER)** and **US004667607 (FLEMING)**.

With regard to claims 1-6 and 10-20, the recitations “A firelight” and “for use within a fireplace” have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Also, with regard to claims 1-6 and 10-20, the phrase “measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace” is deemed a recitation of intended use and as such fails to impart any a positive structural limitation(s) which would distinguish the claimed invention over the prior art of record. It must be emphasized that applicant’s claimed invention is not positively recited as the combination of a firebox and reflective system. Rather the invention is directed to “a reflective system” that is “for use” in a fireplace wherein the light reflective material is measured “to substantially fit within” and to couple substantially parallel to “any pre-determined interior surface of the firebox”. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

US005469839 (KASULIS et al) shows and discloses (Figures 8 and 9) a firelight reflective system for use within a fireplace comprising:

- at least one high temperature mirrored glass light or image reflective material having a viewable surface and a coupling surface, the viewable surface having an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems the system measured to

- substantially fit within, and couple to, one or more interior surfaces of the fireplace; and
- coupling surfaces (for example, 60, 90);
 - at least three of the reflectors (76,86,86; see figures 8 and 9) are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom) thereby providing a three-dimensional view at least to some degree and at least from one viewer's perspective.

US005469839 (KASULIS et al) discloses the following (see column 5, lines 58- column 6, line 8):

“(10) In the embodiment shown in FIGS. 8 and 9, the reflector assembly 74 is fabricated of a plurality of separate components. Such components include a vertical reflector 76 positioned at the rear of the fireplace above that is an angled reflector 78. Such reflectors have downturned edges 80 with apertures 82 for coupling with additional component elements and the interior faces of the side walls of the fireplace.

(11) The next adjacent components are the side reflectors 86. Two similarly shaped side reflectors are utilized. Such reflectors are rectangular in configuration except at one interior corner edge 88 wherein an angle is formed to accommodate the angled reflector 78 at the back of the fireplace. In addition, apertures 90 are formed in the side plates for coupling with the interior side spaces of the fireplace as well as the apertures 82 in the edges of the back and angled reflector plates. FIG. 9 is an enlarged perspective showing of one of the apertures 90 in plate 86 as illustrative of the way coupling may be effected through screws 92.”

US004309142 (GREENSPAN) discloses (beginning column 10, line 19) the following:

(22) The nature of the planar reflectors which makes the above described operation of the display device 10 possible will now be described. In FIG. 5, a conventional planar reflector 90 is shown. Such conventional reflectors are well known and include mirrors as well as other highly polished surfaces. All conventional planar reflectors follow the well known optical law of reflection which, simply stated, is that the angle of incidence on a reflector is equal to the angle of reflection from the reflector.

US003877802 (SHUMAKER) discloses (beginning column 5, line 58) the following:

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(22) ... This is shown diagrammatically in FIGS. 1 and 2. There, the straight line path between the operator 42 and mirror 60 is identified by Roman Numeral II. The straight line path between the mirror 60 and a portion (A) of the digging edge 40 is identified by Roman Numeral III. Following the basic law of mirrors (the angle of incidence equals the angle of reflection) line II and line III will form the same angle with respect to the plane of the mirror. Thus, the operator 42 can see a selected portion of the digging edge of the bucket by viewing the mirror 60 through an aperture 64 in the spill wall 48 portion of the backwall 46. This is diagrammed in FIG. 5.

US003942879 (PLEDGER) discloses (beginning column 1, line 15) the following:

(3) Heretofore, the steering of a mirror to reflect and direct an image, beam, light ray, or other incident radiation hereinafter referred to as the "beam" has involved manually or mechanically positioning the mirror in a manner such that the mirror reflects the beam according too the law of mirror reflection, viz: the angle of incidence is equal to the angle of reflection. Accordingly, the angle between the incident reflected rays is twice the angle of incidence, and the normal line to the plane of the mirror bisects this angle. The task of precisely directing a reflected image or beam involves positioning the mirror such that the normal to the mirror bisects the subtended angle between the source of the beam and the desired position of the beam.

GB2220060 (BUTTERFIELD) discloses (see page 8, line 8) the following:

"Sheet 17 is preferably made of heat-resistant glass ...".

US004121114 (HISER) (of record) discloses (see page 8, line 8) the following:

(23) The decorative aspect of the unit 10 of the present invention as well as improved heat transfer into the room in which the unit 10 is located is enhanced by a highly reflective mirrored fire wall insert 110 which is adapted to be affixed to the firewall 18. Since fire in the fire box 12 is partially set into the room, the mirrored insert provides a startling panorama of reflected and re-reflected images of the fire.

(24) The open front and sides of the fire box 12 are enclosed by a plurality of decorative transparent doors 112 which include a pair of doors on either side of the fire box and a pair of doors traversing the front of the fire box. **Each of the doors 112 comprises a transparent pane 114, which may be constructed as required of a suitable transparent material such as heat treated and/or tempered glass.**

US004667607 (FLEMING) discloses (column 5, beginning line 35; and column 7, beginning line 9) the following:

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(13) In the preferred form of the invention, an inner face sheet 12 of the panel 10 is provided by a sheet of high temperature and thermal shock resistant material such as clear glass material (such as is known in the trade as "Vycor" brand 96% silica glass) which has a high temperature resistance to thermal shock. Another surface sheet 13 of the panel 10 is also preferably provided in a high temperature resistance material but which may have a thermal resistance somewhat less than the material forming the inner sheet 12, e.g. a material such as tempered glass. (column 5, beginning line 35)

(25) Referring now to FIG. 5, a further embodiment of the invention is provided whereby the reflectorization is shown to be provided as treatment particles or a screen matrix embedded in a portion of the inner sheet 12 such as during formation of the inner sheet 12. This is the preferred embodiment of the invention where reflectorization is embedded into the sheets forming the panel 10 however, in an alternative embodiment of the invention, the reflectorization 14 can also be provided in the sheet 13.

(26) While reflectorization is described in this form of the invention as being in the form of a substantially mirrored surface using materials such as chromium, nickel, aluminum or metal alloy or oxide treatments, it will be appreciated that in alternative forms of the invention. Other reflectorization materials may be utilized such as those where the proportion of the incident radiant heat reflected varies in respect of certain radiant heat wavelengths to enable selective reflection of radiant heat back into the cavity 7; e.g. materials such as particles, screens, sheets, films, layers and the like having reflective properties.

With regard to claims 1-6 and 10-20, applicant's attention is directed to Figure 8 of the prior art reference **US005469839 (KASULIS et al)**(of record) which clearly illustrates a glass mirrored material having both image and light reflective characteristics where, for example, an image of a burning log set (94) and an image of the flames (at 78) are located within the vertical surfaces (76, 78, 86) and presented by the reflective material to a viewer at least in a location oriented according to the perspective represented in figure 8 of **US005469839 (KASULIS et al)**.

Thus, since each reflective panel of **US005469839 (KASULIS et al)** displays an image to a viewer that is located within the vertical surfaces, the reflective panels of **US005469839 (KASULIS et al)** would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems in the manner set forth in applicant's claims. And, as supported by **US003877802 (SHUMAKER)**, **US004309142 (GREENSPAN)** and **US003942879 (PLEDGER)**, the examiner maintains the

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position that since each reflective panel of **US005469839 (KASULIS et al)** displays an image to a viewer that is located within the vertical surfaces, the reflective panels of **US005469839 (KASULIS et al)** being oriented parallel to the wall of a firebox, would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems and would provide a three-dimensional view at least to some degree and at least from one viewer's "perspective", in the manner set forth in applicant's claims.

In regard to claims 2 and 12, for example, the temperature resistant mirrored glass material of **US005469839 (KASULIS et al)** would be thought of by a person having ordinary skill in the art to necessarily, or obviously, be of the "tempered" glass type since non-tempered glass would not be capable of withstanding thermal expansion and contraction thereof due to thermal cycling of the system. Tempering being a well known process for stabilizing glassware when used in high temperature conditions. In support of this conclusion the Examiner relies in the following prior art documents the evidence presented in **GB2220060 (BUTTERFIELD)**, **US004121114 (HISER)** and **US004667607 (FLEMING)**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims **8** and **9** rejected under 35 U.S.C. 103(a) as being unpatentable over **US005469839 (KASULIS et al)** in view of **JP 2003-79507**.

US005469839 (KASULIS et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- a heat resistant adhesive being adapted to substantially permanently couple the coupling surface to the interior surfaces of the fireplace.

JP 2003-79507 teaches, from applicant's same flame display field of endeavor coupling mirrors to the interior surface of a chamber body with adhesive.

In regard to claims **8** and **9**, for the purpose substantially permanently coupling the mirror to the fireplace it would have been obvious to a person having ordinary skill in the art to apply and adhesive, have the necessary heat-resistant properties, to the surface to the interior surfaces of the fireplace, in view of the teaching of **JP 2003-79507**.

Conclusion

See the attached USPTO for, 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

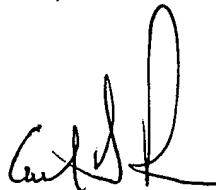
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USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CARL D. PRICE

Primary Examiner

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